1000 River Street
Mail Stop 966A
Essex Junction, VT 05452

September 12th, 2013

Chief, RCRA Waste Management & UST Section
U.S. EPA Region 1 (OSRR07-1)
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Reference: IBM Corporation, Essex Junction, VT Wastewater Treatment Sludge Delisting (40 CFR 261, Appendix IX – Waste Excluded Under §§ 260.20 and 260.22, Table 1 – Wastes Excluded from Non-Specific Sources)

Subject: Submission of Analytical Results for the Fourth Quarter of the Required Quarterly Verification Testing

Dear Ms. Deabay:

As outlined in IBM Corporation's Wastewater Treatment Sludge Delisting (40 CFR 261, Appendix IX – Waste Excluded Under §§ 260.20 and 260.22, Table 1 – Wastes Excluded from Non-Specific Sources), IBM is providing the fourth quarter of analytical results required as part of the quarterly verification testing process. Sample collection and analysis were performed in accordance with the approved Quality Assurance Project Plan (QAPP) dated 01/27/2011.

The analytical results for both representative samples (Attachment A) show all constituents in paragraph (1) of the delisting to be below detection limits and specified delisting levels.

If you have any questions concerning this information, please contact one of the following members of my staff:

Candice Callahan by telephone at 769-0579 or electronically at ccallaha@us.ibm.com
David Kost by telephone at 769-2761 or electronically at dlkost@us.ibm.com

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Sincerely,

Thomas Jagielski
Manager of Environmental Programs, Planning, STG Environmental Affairs Focal Point

Attachments:

Attachment A: Analytical Results for Two Representative Samples with Corresponding Analytical Laboratory Reports and Laboratory QC Reports

Attachment A
Analytical Results for Two Representative Samples with Corresponding Analytical Laboratory Reports and Laboratory QC Reports

ENDYNE Inc.
Environmental Laboratories

IBM	
Mail Stop 966A	100290
Essex Jct, VT 05452	
Atten: Dave Kost	

PROJECT: WW Sludge TCLP Metals
WORK ORDER: **1307-12365**
DATE RECEIVED: July 09, 2013
DATE REPORTED: July 18, 2013
SAMPLER: Roland Luxenburg

Laboratory Report

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. All required method quality control elements including instrument calibration were performed in accordance with method requirements and determined to be acceptable unless otherwise noted.

The column labeled Lab/Tech in the accompanying report denotes the laboratory facility where the testing was performed and the technician who conducted the assay. A "W" designates the Williston, VT lab under NELAC certification ELAP 11263; "R" designates the Lebanon, NH facility under certification NH 2037 and "N" the Plattsburgh, NY lab under certification ELAP 11892. "Sub" indicates the testing was performed by a subcontracted laboratory. The accreditation status of the subcontracted lab is referenced in the corresponding NELAC and Qual fields.

The NELAC column also denotes the accreditation status of each laboratory for each reported parameter. "A" indicates the referenced laboratory is NELAC accredited for the parameter reported. "N" indicates the laboratory is not accredited. "U" indicates that NELAC does not offer accreditation for that parameter in that specific matrix. Test results denoted with an "A" meet all National Environmental Laboratory Accreditation Program requirements except where denoted by pertinent data qualifiers. Test results are representative of the samples as they were received at the laboratory

Endyne, Inc. warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose.

Reviewed by:

Harry B. Locker, Ph.D.
Laboratory Director

Laboratory Report DATE REPORTED: 07/18/2013

CLIENT: IBM
PROJECT: WW Sludge TCLP Metals

WORK ORDER: **1307-12365**
DATE RECEIVED: 07/09/2013

001 Site: Sludge Plugs Date Sampled: 7/9/13 Time: 6:08

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
TCLP Extract-SVOA/Metals	Completed		EPA 1311	7/15/13	W AWM	A	
Arsenic, Total TCLP	< 0.50	mg/L	EPA 6010B	7/18/13	W RGT	A	
Barium, Total TCLP	< 1.0	mg/L	EPA 6010B	7/18/13	W RGT	A	
Cadmium, Total TCLP	< 0.020	mg/L	EPA 6010B	7/18/13	W RGT	A	
Chromium, Total TCLP	< 0.05	mg/L	EPA 6010B	7/18/13	W RGT	A	
Lead, Total TCLP	< 0.20	mg/L	EPA 6010B	7/18/13	W RGT	A	
Mercury, Total TCLP	< 0.010	mg/L	EPA 7470	7/17/13	W CM	A	
Nickel, Total TCLP	< 0.10	mg/L	EPA 6010B	7/18/13	W RGT	A	

JUL

WW Sludge TCLP Metals

Endyne Inc. COC

Prepared: 4/23/13

Lab Use WO# 1307-12365

Bill to:
IBM
Mail Stop 964B
Essex Jct VT 05452
Ph: 769-2761

Report to:
Dave Kost
IBM
Mail Stop 966A
Essex Jct VT 05452
IBM_WW

Cust # 100290
IBMWW
W-100290ST

Facility ID: Smp Pt: Categ: Smp Type Repl Ind: Compl Ind: Y / N

Sludge Plugs

Final Sample Date/Time: 6/9/13 @1234 7 lb per bottle Sampler: _____

Additional Sample Collection Date/Times: 6/8/13 @ 0643 6/9/13 @ 0808
__/__/__@_____ __/__/__@_____ 7/9/@
08 7 lb per bottle

TCLP Extraction-SVOA/Metals 8oz or 16oz Plastic Bottle(~200g) < 6 Celsius

TCLP Metals ICP Digestion	TCLP Metals	Post TCLP Ext HNO3
Arsenic, Total TCLP		
Barium, Total TCLP		
Cadmium, Total TCLP		
Chromium, Total TCLP		
Lead, Total TCLP		
Mercury, Total TCLP		
Nickel, Total TCLP		

Sample collection is composite over time.
Upon arrival at Endyne, all plugs are broken up and sample is thoroughly mixed.

Special reporting instructions; e-mail group WWIBMSLUDGE
(includes Candice Callahan, Clarissa Santos & David Kost)

Relinquished by: [signature] 6/9/13 1330 Date Time Accepted by: E. Rooney 7/9 1:30 Date Time

Relinquished by: _____ Date Time Received by: _____ Date Time

Sites/Parameters correct as listed. Client Initials RRL

Client Authorization to use Subcontract lab Client Initials _____

Sample origin: VT ☑ NH ☐ NY ☐ Other ☐

Special reporting instructions: (PO#) _____

Requested Turnaround Time: Routine: Rush Due Date _____

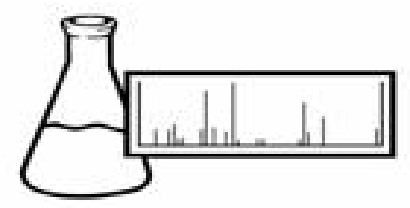
Lab use Only
Delv: Client
Temp C: 14.8
Comment:
Tmpl Ck
Log by

ENDYNE Inc.
www.endynelabs.com

160 James Brown Dr.
Williston, VT 05495
Ph 802-879-4333
Fax 802-879-7103

56 Etna Road
Lebanon, NH 03766
Ph 603-678-4891
Fax 603-678-4893

315 New York Rd.
Plattsburgh, NY 12903
Ph 518-563-1720
Fax 518-563-0052



ENDYNE, INC.
Laboratory Services

160 James Brown Drive
Williston, VT 05495
(802) 879-4333

QC Data Interpretation Report
EPA 7470 Mercury-TCLP

Client:	IBM	Work Order:	**1307-12365**
Project:	WW Sludge-Metals	Sample Date:	July 8-9 2013
Report Date:	July 18, 2013	Analysis Date:	July 17, 2013
Receive Date:	July 9, 2013	Analytical Batch #:	78308

Analytical Run Sequence

Run Sequence Identification	Result as ug/L	Target	% Recovery	Reported Value mg/L
Calibration Verification:	1.969	2	98%	
Laboratory Reagent Blank	0.013			
Independent Laboratory Fortified Blank:	2.032	2	101.6%	
1305-08714-001	0.030			< 0.010
Matrix Spike of 08714-001	2.044	2	102%	
Matrix Spike Duplicate	2.069		1.2%	% Difference
Continuing Calibration Check	2.046	2	102%	

Notes:

All Method associated Quality Control was within acceptance limits

-Instrument Quantitation Limit is 1.0ug/L

- All TCLP analyses are analyzed at a 1-10 dilution.

-Calibration Verification acceptance limits:	90%-110%
-Laboratory Fortified Blank (QC) control limits:	90%-110%

-Laboratory Reagent Blank (LRB) was free of contaminant affecting analytical results.

-Duplicate Percent Relative Standard Deviation Limits:	20%
-Matrix Spike Acceptance Limits:	85%-115%

Laboratory Data Quality Report
EPA 6010B- ICP Metals TCLP

ENDYNE INC.
Laboratory Services

160 James Brown Drive
Williston, VT 05495
(802) 879-4333 FAX 879-7103

Client: IBM
Project: WW Sludge-Metals
Sampled: July 8-9, 2013

Work Order #: 1307-12365
Date Received: July 9, 2013
Date Reported: July 18, 2013

Date Analyzed: June 3, 2013
Analytical Batch #: 78,463

Parameter	Int. Chk. mg/L	Int. Chk. % Rec	CCV mg/L	CCV % Rec	LFB mg/L	LFB % Rec	LRB (mg/L)	1307-12365-001 mg/L *	1307-12365-001 Reported	MS (LFM) mg/L	MS (LFM) % Rec	MSD mg/L	MSD % Diff	CCV mg/L	CCV % Rec
Arsenic	-0.0132	NA	0.9521	95%	0.9518	95.2%	0.0061	-0.0080	< 0.5	1.0719	107.2%	1.0849	1.2%	0.9891	98.9%
Barium	0.4863	97.3%	0.9396	94.0%	0.935	93.5%	0.0001	0.0096	< 1.0	0.9627	96.3%	0.9820	2.0%	0.9838	98.4%
Cadmium	0.9815	98.2%	0.0955	95.5%	0.0948	94.8%	0.0005	0.0006	< 0.02	0.0987	98.7%	0.1008	2.1%	0.0993	99.3%
Chromium	0.4628	92.6%	0.9312	93.1%	0.9332	93.3%	0.0013	0.0034	< 0.05	0.9773	97.7%	0.9984	2.1%	0.9802	98.0%
Lead ***	0.9163	91.6%	0.9453	94.5%	0.9397	94.0%	0.0068	0.0018	< 0.20	0.9507	95.1%	0.9700	2.0%	0.9846	98.5%
Nickel	0.9295	93.0%	0.9526	95.3%	0.9473	94.7%	-0.0002	0.0033	< 0.10	0.9791	97.9%	0.9979	1.9%	0.9898	99.0%

Notes:

* SOP is to digest at a 1-10 dilution. mg/L value is instrument measurement not accounting for dilution.

- NA: Not Available. Sample not assessed for this element.
- All QA parameters were within acceptance limits unless otherwise noted. Bold Font indicates value outside laboratory acceptance limits
- (Int. Chk.) Interference Check acceptance limits: 70 - 130%.
- (CCV) Continuing Calibration Verification acceptance limits: 90 - 110%.
- (LFB) Laboratory Fortified Blank digested in TCLP Buffer acceptance limits are 85-115%.
- (LRB) Laboratory Reagent Blank digested in TCLP Buffer was free of contaminant affecting analytical results.
- (MS) Matrix Spike acceptance limits: 70 - 130%. Values were determined to be within method acceptance limits unless noted.
- (MSD) Matrix Spike Duplicatee relative percent difference (RPD) acceptance criteria is < 20%.

ENDYNE Inc.
Environmental Laboratories

IBM	
Mail Stop 966A	100290
Essex Jct, VT 05452	
Atten: Dave Kost	

PROJECT: WW Sludge TCLP Metals
WORK ORDER: **1308-15584**
DATE RECEIVED: August 14, 2013
DATE REPORTED: September 11, 2013
SAMPLER: Roland Luxenburg

Laboratory Report

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. All required method quality control elements including instrument calibration were performed in accordance with method requirements and determined to be acceptable unless otherwise noted.

The column labeled Lab/Tech in the accompanying report denotes the laboratory facility where the testing was performed and the technician who conducted the assay. A "W" designates the Williston, VT lab under NELAC certification ELAP 11263; "R" designates the Lebanon, NH facility under certification NH 2037 and "N" the Plattsburgh, NY lab under certification ELAP 11892. "Sub" indicates the testing was performed by a subcontracted laboratory. The accreditation status of the subcontracted lab is referenced in the corresponding NELAC and Qual fields.

The NELAC column also denotes the accreditation status of each laboratory for each reported parameter. "A" indicates the referenced laboratory is NELAC accredited for the parameter reported. "N" indicates the laboratory is not accredited. "U" indicates that NELAC does not offer accreditation for that parameter in that specific matrix. Test results denoted with an "A" meet all National Environmental Laboratory Accreditation Program requirements except where denoted by pertinent data qualifiers. Test results are representative of the samples as they were received at the laboratory

Endyne, Inc. warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose.

Reviewed by:

Harry B. Locker, Ph.D.
Laboratory Director

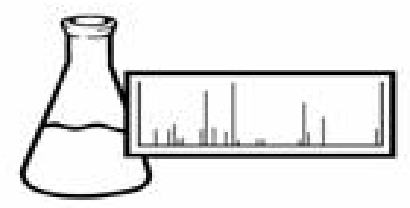
Laboratory Report DATE REPORTED: 09/11/2013

CLIENT: IBM
PROJECT: WW Sludge TCLP Metals

WORK ORDER: **1308-15584**
DATE RECEIVED: 08/14/2013

001 Site: Sludge Plugs Date Sampled: 8/14/13 Time: 5:15

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
TCLP Extract-SVOA/Metals	Completed		EPA 1311	8/20/13	W AWM	A	
Arsenic, Total TCLP	< 0.50	mg/L	EPA 6010B	8/22/13	W RGT	A	
Barium, Total TCLP	< 1.0	mg/L	EPA 6010B	8/22/13	W RGT	A	
Cadmium, Total TCLP	< 0.020	mg/L	EPA 6010B	8/22/13	W RGT	A	
Chromium, Total TCLP	< 0.05	mg/L	EPA 6010B	8/22/13	W RGT	A	
Lead, Total TCLP	< 0.20	mg/L	EPA 6010B	8/22/13	W RGT	A	
Mercury, Total TCLP	< 0.010	mg/L	EPA 7470	8/27/13	W CM	A	
Nickel, Total TCLP	< 0.10	mg/L	EPA 6010B	8/22/13	W RGT	A	



ENDYNE, INC.
Laboratory Services

160 James Brown Drive
Williston, VT 05495
(802) 879-4333

QC Data Interpretation Report
EPA 7470 Mercury-TCLP

Client:	IBM	Work Order:	**1308-15584**
Project:	WW Sludge-Metals	Sample Date:	August 13-14, 2013
Report Date:	September 11, 2013	Analysis Date:	August 27, 2013
Receive Date:	August 14, 2013	Analytical Batch #:	80145

Analytical Run Sequence

Run Sequence Identification	Result as ug/L	Target	% Recovery	Reported Value mg/L
Calibration Verification:	1.991	2	100%	
Laboratory Reagent Blank	-0.009			
Independent Laboratory Fortified Blank:	1.957	2	97.9%	
1308-15584-01	0.010			< 0.010
Matrix Spike of 15584-01	1.989	2	99%	
Matrix Spike Duplicate	1.958		1.6%	% Difference
Continuing Calibration Check	2.014	2	101%	

Notes:

All Method associated Quality Control was within acceptance limits

-Instrument Quantitation Limit is 1.0ug/L

- All TCLP analyses are analyzed at a 1-10 dilution.

-Calibration Verification acceptance limits:	90%-110%
-Laboratory Fortified Blank (QC) control limits:	90%-110%

-Laboratory Reagent Blank (LRB) was free of contaminant affecting analytical results.

-Duplicate Percent Relative Standard Deviation Limits:	20%
-Matrix Spike Acceptance Limits:	85%-115%

Laboratory Data Quality Report
EPA 6010B- ICP Metals TCLP

ENDYNE INC.
Laboratory Services

160 James Brown Drive
Williston, VT 05495
(802) 879-4333 FAX 879-7103

Client: IBM
Project: WW Sludge-Metals
Sampled: August 13-14, 2013

Work Order #: 1308-15584
Date Received: August 14, 2013
Date Reported: September 11, 2013

Date Analyzed: August 22, 2013
Analytical Batch #: 80,012

Parameter	Int. Chk. mg/L	Int. Chk. % Rec	CCV mg/L	CCV % Rec	LFB mg/L	LFB % Rec	LRB (mg/L)	1308-15584-01 mg/L *	1308-15584-01 Reported	CCV mg/L	CCV % Rec	Spiked Sample *	MS (LFM) mg/L	MS (LFM) % Rec	MSD mg/L	MSD % Diff
Arsenic	0.003	NA	1.0157	102%	0.9542	95.4%	0.0009	0.0058	< 0.5	1.001	100.1%	-0.0033	0.982	98.2%	0.9878	0.6%
Barium	0.4106	82.1%	0.9938	99.4%	0.9572	95.7%	0.0000	0.0067	< 1.0	0.9911	99.1%	0.0109	0.9148	91.5%	0.9285	1.5%
Cadmium	0.9803	98.0%	0.1015	101.5%	0.0951	95.1%	0.0004	-0.001	< 0.02	0.1003	100.3%	0.0001	0.0930	93.0%	0.0944	1.5%
Chromium	0.4899	98.0%	1.0172	101.7%	0.9891	98.9%	0.0022	0.0031	< 0.05	1.0161	101.6%	-0.0001	0.9585	95.9%	0.9702	1.2%
Lead	0.9561	95.6%	1.0115	101.2%	0.9737	97.4%	0.0023	-0.0017	< 0.20	1.0069	100.7%	-0.0029	0.9285	92.9%	0.9382	1.0%
Nickel	0.9413	94.1%	1.0167	101.7%	0.9626	96.3%	-0.0007	0.0041	< 0.10	1.0046	100.5%	0.0024	0.9348	93.5%	0.9477	1.4%

Notes:

* Digestion Batch Matrix Spike/ Duplicate sample was not 1308-15584-01

- SOP is to digest at a 1-10 dilution. mg/L value is instrument measurement not accounting for dilution.
- NA: Not Available. Sample not assessed for this element.
- All QA parameters were within acceptance limits unless otherwise noted. Bold Font indicates value outside laboratory acceptance limits
- (Int. Chk.) Interference Check acceptance limits: 70 - 130%.
- (CCV) Continuing Calibration Verification acceptance limits: 90 - 110%.
- (LFB) Laboratory Fortified Blank digested in TCLP Buffer acceptance limits are 85-115%.
- (LRB) Laboratory Reagent Blank digested in TCLP Buffer was free of contaminant affecting analytical results.
- (MS) Matrix Spike acceptance limits: 70 - 130%. Values were determined to be within method acceptance limits unless noted.
- (MSD) Matrix Spike Duplicatee relative percent difference (RPD) acceptance criteria is < 20%.

WW Sludge TCLP Metals

Endyne Inc. COC

Prepared: 4/23/13

Lab Use WO# 1308-15584

Bill to:

IBM
Mail Stop 964B
Essex Jct VT 05452
Ph: 769-2761

Report to:
Dave Kost
IBM
Mail Stop 966A
Essex Jct VT 05452
IBM_WW

Cust # 100290

IBMWW

W-100290ST

Facility ID: | Smp Pt: | Categ: | Smp Type | Repl Ind: | Compl Ind: Y / N

Sludge Plugs

Final Sample Date/Time: 8/13/13 @ 0619 Sampler: JT/RS

Additional Sample Collection Date/Times: 8/13/13 @ 1300 8/14/13 @ 0515
__/__/__ @ __ __/__/__ @ __ __/__/__ @ __

TCLP Extraction-SVOA/Metals | 8oz or 16oz Plastic Bottle(~200g) | < 6 Celsius

TCLP Metals ICP Digestion | TCLP Metals | Post TCLP Ext HNO3

Arsenic, Total TCLP
Barium, Total TCLP
Cadmium, Total TCLP
Chromium, Total TCLP
Lead, Total TCLP
Mercury, Total TCLP
Nickel, Total TCLP

Sample colllection is composite over time.
Upon arrival at Endyne, all plugs are broken up and sample is thoroughly mixed.

Special reporting instructions; e-mail group WWIBMSLUDGE
(includes Candice Callahan, Clarissa Santos & David Kost)

Relinquished by: [signature] 8/14/13 1135 Date Time

Accepted by: Eileen Dorney 8/14 @ 11:35 Date Time

Relinquished by: _____ Date Time

Received by: _____ Date Time

Sites/Parameters correct as listed. Client Initials RRL

Client Authorization to use Subcontract lab Client Initials _____

Sample origin: VT [X] NH [ ] NY [ ] Other [ ]

Special reporting instructions: (PO#) _____

Requested Turnaround Time: Routine: Rush Due Date _____

Lab use Only

Delv: Client
Temp C: 16.1
Comment:

Tmpl Ck
Log by

ENDYNE Inc.
www.endynelabs.com

160 James Brown Dr.
Williston, VT 05495
Ph 802-879-4333
Fax 802-879-7103

56 Etna Road
Lebanon, NH 03766
Ph 603-678-4891
Fax 603-678-4893

315 New York Rd.
Plattsburgh, NY 12903
Ph 518-563-1720
Fax 518-563-0052